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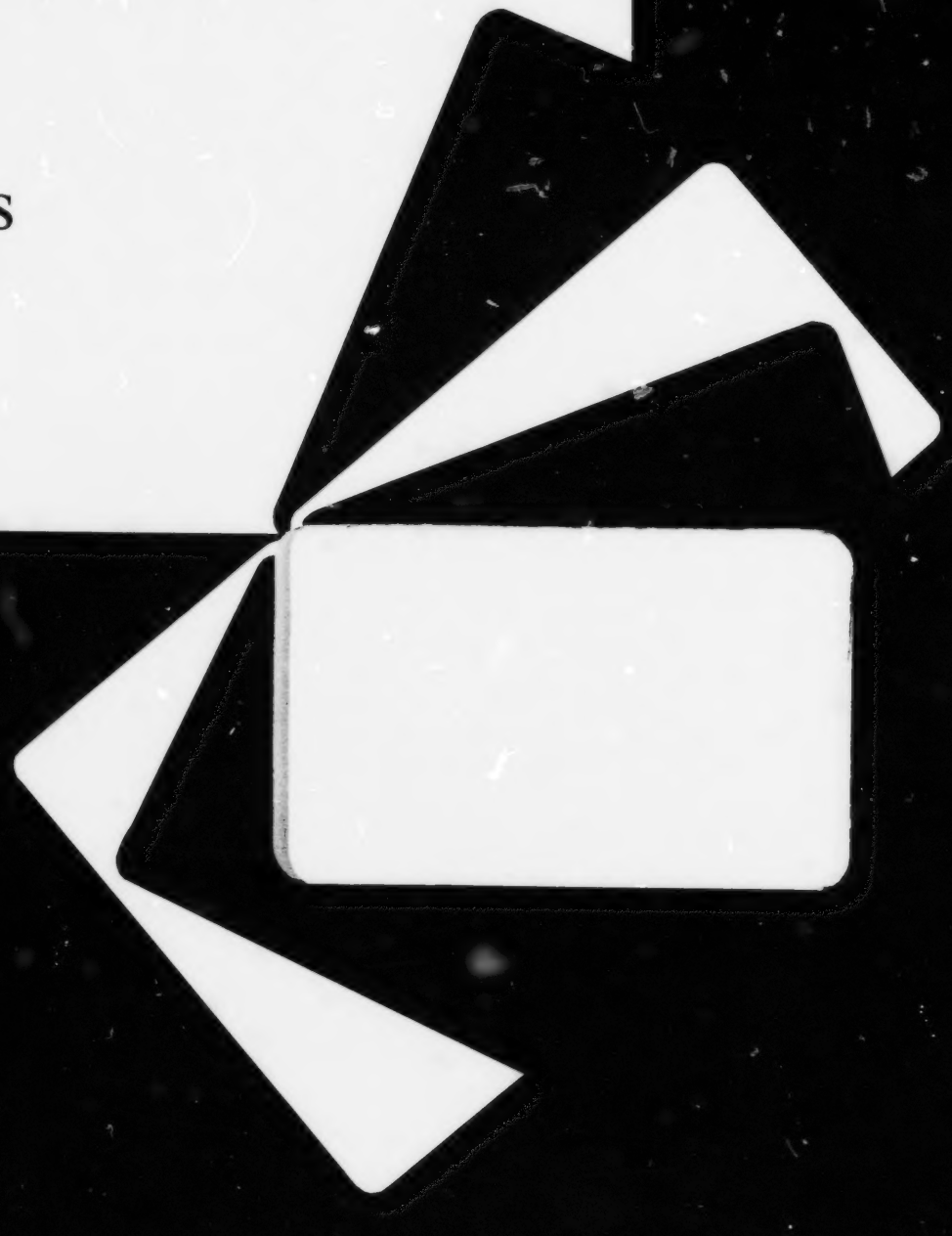

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A THREE YEAR POSTPROGRAM FOLLOW-UP OF THE CAVIC PROBATIONERS: THE EFFECTS OF SELECTION OF OFFICERS, SUPERVISION BY VOLUNTEERS AND SUPERVISION PRACTICES ON RECIDIVISM

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EXECUTIVE SUMMARY

A three year postprogram follow-up of the probationers who participated in the CaVIC project was conducted. Evidence of the presence or absence of official reconvictions was obtained from the FPS service of the RCMP for 185 of the original 190 CaVIC probationers.

Probation officers were classified by pretests on paper and pencil measures of sensitivity to persons and to conventional rules and procedures. Probationers assigned to officers who presented the dual sensitivities to persons and rules continued to show reduced recidivism at the end of follow-up relative to probationers supervised by the other officers. Those probationers also spent fewer of their follow-up months in prison.

Supervision by citizen volunteers was no less effective than supervision by professionals overall and there was evidence that the introduction of differential intervention strategies would result in reduced recidivism.

Objective behavioural measures of actual supervision practices were found to maintain their predictive validity to the end of the follow-up period. One measure, use of community resources, emerged as a significant factor over the postprogram period. Relatively low recidivism rates were associated with the following practices: the officers' use of authority inherent in the officer role; anticriminal modeling or vivid demonstrations of anticriminal positions; problem-solving with a concrete community focus; use of community resources; and, low rates of use of the non-directive active listening strategy of the relationship school of counselling and supervision. The higher levels of supervision practice appeared to be most important when dealing with the higher risk probationers.

Pretest measures of probationer characteristics were increasingly predictive of recidivism over the follow-up period and even a very brief socio-historical inventory was able to suggest the potential of risk/need scales.

The findings, in combination with other studies reviewed in the CaVIC series, suggest that broad conceptually-based approaches to program operations and evaluation have the potential of contributing in concrete ways to the pursuit of the objectives of correctional agencies. The specific practices of correctional workers make a difference and selection, training, the creation of new roles and differential intervention strategies all have the potential of contributing measurable improvements in correctional services.

INTRODUCTION

CaVIC (Canadian Volunteers in Corrections) was a three year study of the quality and effectiveness of the one-to-one supervision of adult probationers (Andrews, Kiessling et al., 1979). The study was conducted in the Ottawa Adult Probation and Parole Office during the mid-1970's. The present paper reports on the results of a three year postprogram follow-up of the CaVIC probationers. A postprogram follow-up is important in order to examine the persistence of treatment effects. It is equally important to examine the possibility that the factors which relate to postprogram recidivism may not be the same as the factors which relate to inprogram recidivism. Crime control is one widely-accepted objective for corrections and we must take seriously the possibility that correctional efforts may have differential effects on inprogram and postprogram recidivism.

CaVIC was designed to speak to six general issues in correctional programming:

1) The Volunteer factor. The quality and effectiveness of the one-to-one supervision offered by citizen volunteers was compared with the supervision offered by professional probation officers.

2) The Selection factor. The selection issue was whether the quality and effectiveness of services could be enhanced by selecting officers for direct supervision roles on the basis of personality dimensions which were purported to tap predispositions to engage in effective supervision practices.

3) The Practices factor. Given the "nothing works" rhetoric of the 1970's, important questions included whether objective behavioural measures of direct services could be developed and whether those measures related to subsequent variations in recidivism. If objective operational definitions of some "effective practices" could be developed, then the preservice and inservice training and supervision of direct service workers could be upgraded.

4) Differential Treatment. Offenders represent a heterogeneous group and hence there was the possibility the impact of volunteer, selection and practice factors depended upon the characteristics of probationers.

5) The Predictors of Recidivism. CaVIC was one of the first Canadian studies to pretest adult probationers on a wide variety of measures and thus the opportunity existed to explore the client-based predictors of recidivism. Such information has implications for the development of risk and need scales.

6) The Identification of Functional Predictors. CaVIC included a sixth month retest on a comprehensive attitude and personality battery and hence we were able to explore the "functional validity" of attributes of clients and their perceived situations. The concept of "functional validity" (Andrews, 1981a) has been offered as a potentially important alternative to the cross-sectional and longitudinal approaches to validation in the behavioural and social sciences. In brief, what attributes of offenders and their situations are, when changed, associated with subsequent variations in the probability of recidivism? Answers to this question are crucial to the identification of appropriate intermediate targets for change in correctional programs.

The Conceptual Base of CaVIC

The design of CaVIC was guided by a general social learning perspective on criminal conduct and corrections. In combination with the social learning orientation was an interdisciplinary model of program operations and evaluation which attempted to link the concerns of theorists, researchers, practitioners and program managers in some explicit ways (Andrews, 1980a; Andrews & Kiessling, 1980; Kiessling and Andrews, 1980). In brief, the creation of new roles (such as that of volunteers) and control of the training and selection factors may represent ways for program managers to encourage effective practices on the part of practitioners. For their part, theory and research suggest and document the links among program structure, practice and intermediate and ultimate impact upon the offender.

A social learning perspective on criminal behaviour suggests that attributes of persons and their situations are important in relation to criminal behaviour insofar as the attributes reflect or influence the rewards and costs delivered or expected to be delivered for either criminal or noncriminal behaviours. Rewards, costs and expectations regarding their delivery may be self-imposed or externally-imposed. The self-imposed contingencies often reflect self-management according to one's personal standards of conduct. Standards of conduct may be derived from personal attitudes, values and beliefs regarding the law, law violations, law violators and noncriminal pursuits. Thus, one way to rearrange the rewards and costs such that the criminal behaviours are less favoured is to bring about anticriminal changes in attitudes and beliefs.

The externally-imposed rewards and costs may be of various types but interpersonal approval and disapproval appear to be particularly powerful ones, as are money and property. One overall way of producing

a major shift in the rewards and costs such that criminal behaviours become less favoured is to increase the number, variety and quality of the rewards delivered within anticriminal behavioural settings such as the home, school, work and peer groups.

Our particular version of social learning theory was sketched in Chapter One of Andrews, Kiessling et al. (1979) and was employed throughout the Andrews (1979a) monograph on correctional practices. A more complete statement (Andrews, 1980b) suggests some important qualifications and specifications but, in general, a correctional effort which aimed to reduce postprogram recidivism would set and achieve the following intermediate objectives:

a) an anticriminal shift in personal attitudes and beliefs; and/or

b) an increased density of rewards and decreased density of costs for noncriminal pursuits.

To specify objectives in terms of the functional attributes of offenders and their situations is not to imply that the pursuit of those objectives would occur in a political, economic or ethical vacuum. Corrections, like any other area in the human and social services, is sensitive to the rights of the workers and the offenders and to the expectations of the public.

Two major sets of practices likely to influence personal sentiments were hypothesized to be the worker's use of the authority inherent in his/her role (Andrews, 1979a, Chapter Two) and anticriminal modeling and differential reinforcement (Andrews, 1979a, Chapter Three):

> Authority. Use of authority involves explicit reviews of the formal conditions of probation, of the formal sanctions associated with those rules, and attempts to render the rules and sanctions concrete in terms most relevant to the individual offender. Such a definition of authority is quite different from its usual associations with "interpersonal domination" or the application of "raw power". It is a specification of the contingencies, and we would think, it involves not only a duty on the part of the correctional worker but the right of the offender to a full understanding of his or her situation and that of the worker's with regards to the law, the courts and the correctional agency.
>
> Anticriminal modeling and differential reinforcement. The modeling practices involve workers providing vivid demonstrations of sentiments and behaviours which are frankly anticriminal and prosocial. Anticriminal reinforcement refers to the extent to which correctional officers offer differential approval and disapproval of the offender's anticriminal and procriminal expressions. At its

highest level, the expression of disapproval is always combined with the exposure of anticriminal alternatives. (A discussion of the content of anticriminal and procriminal expressions is presented in Andrews, 1980c.)

Two major sets of practices for influencing the density of the rewards (increasing) and the costs (decreasing) in conventional settings were hypothesized to be problem-solving and the use of community resources (Andrews, 1979a, Chapter Four):

Problem-solving. Problem-solving within the context of one-to-one supervision involves assessments of the sources of reward deficits and costly excesses, and systematic planning and implementation efforts to increase the rewards and decrease the costs within noncriminal settings. The reward deficits may reflect difficulties gaining entry into noncriminal settings; they may reflect inappropriate behaviours on the part of the offender within a setting; and sometines the setting may not be distributing rewards equitably even though the offender's behaviour seems normative. Three subsets of problem-solving were sampled in CaVIC: problem-solving with a concrete community focus (home, work, etc.), with a personal/emotional focus (the typical concern of psychodynamic approaches), and with a recreational focus (a typical concern of volunteer programs).

Use of community resources. Within the context of one-to-one supervision, this set of practices essentially involves referral activities: referrals which may vary from casual references to the existence of community agencies, to concrete planning regarding the ways and means of gaining access to those resources. While advocacy-brokerage models have a strong rhetorical and political appeal, our reviews of the literature have consistently failed to uncover any systematic empirical evidence of their efficacy.

Authority, anticriminal modeling, problem-solving and use of community resources are direct and rather directive attempts to alter the balance of rewards and costs in effect for criminal and noncriminal behaviours. Such practices contrast rather sharply with the socio-emotional (or "relationship" or "cohesiveness") emphasis often found in the counselling literature, in the early statements of a "clinical sociology" and in the friendship models of voluntary action (Andrews, 1979b; Andrews, 1979a, Chapter One). One does not need a behavioural science rationale in order to accept or promote the human position that offenders should be listened to and should be treated with dignity and

with respect for their rights. However, some perspectives on correctional counselling have altered this basic premise to the extent that they have identified the non-directive and relationship-oriented practices as the sole or the primary means of influencing correctional outcomes. More reasonable is the suggestion that positive relationships between workers and offenders may translate into positive or negative correctional outcomes depending upon the extent to which the worker also engages in the more directive practices (Andrews, 1980a).

The relationship issue explored in CaVIC was the conditions under which objective measures of relationship-oriented practices on the part of the worker related to recidivism. Such practices included active listening (paraphrasing of substance and reflection of feelings), friendly expressions, self-disclosure and specificity or concreteness of expression. Note that the measurement of these practices, unlike authority and anticriminal modeling and reinforcement, do not require distinctions regarding the anticriminal or procriminal content of the expressions.

The Inprogram CaVIC Findings

The Volunteer factor. Volunteer supervision was more intensive on frequency-of-contact measures than was professional supervision. Moreover, the volunteers were more relationship-oriented while the professionals were more oriented toward directive services. On objective measures of actual practices during audio-taped supervision sessions, the professionals appeared to be relative experts in brief, directive supervision. On average, the probationers assigned to volunteers were seen more often but the probationers assigned to professionals, when seen, received higher quality services.

The Selection factor. The overall theoretical perspective suggested that two relevant dimensions for effective practice were the ability to establish high quality interpersonal relationships in combination with a disposition to establish anticriminal contingencies. The Hogan (1969) Empathy scale was the measure of officers' predisposition to adopt open, warm and flexible styles of interaction while the Gough (1969) Socialization scale was the measure of officers' sensitivity to conventional rules and procedures. The empathy level of officers was associated with positive evaluations by program managers and with positive evaluations by probationers and the officers themselves on the quality of the interpersonal relationships established during supervision. The Socialization scores of officers were associated with positive evaluations by probationers and their officers on the help and assistance offered the probationers. In brief,

consumer (worker, client and manager) satisfaction was relatively high when workers presented the dual sensitivity to persons and to conventional rules.

Effects of officer Socialization were also found on measures of actual practices during audio-taped counselling sessions. Socialization scores were associated with relatively high levels of anticriminal modeling and differential reinforcement and with relatively low rates of non-directive friendly expressions. Most interesting, pretested Empathy scores were unrelated to actual practices during the audio-taped sessions. It appeared that the officers' predisposition to adopt an open, warm and flexible interpersonal style — a style appreciated in the ratings of program managers and probationers — was something quite different from the more technical relationship practices that something like "active listening" represents.

Most importantly, probationers assigned to the high empathy - high socialization officers showed greater inprogram anticriminal attitudinal changes and reduced inprogram recidivism relative to probationers assigned to other officers.

The Practices factor. Psychometric analyses of the objective, behavioural measures of supervision practices during audio-taped sessions revealed good-to-excellent degrees of inter-rater reliability as well as some statistically reliable correlations with inprogram recidivism. In brief, use of authority, anticriminal modeling and reinforcement, and problem-solving with a community focus were predictive of relatively low rates of inprogram recidivism. Use of community resources was unrelated to recidivism while the active listening strategy was associated with relatively high rates of recidivism.

The Differential Treatment issue. With the invaluable assistance of Glaser's (1974) review, our social learning perspective suggests that the dominant differential treatment strategies reduce to the classification of offenders on three major dimensions: ties to crime (criminal history, associates and sentiments), ties to convention (a history of rewarded involvements in conventional settings) and interpersonal sensitivity (empathy). Strong ties to crime in combination with weak ties to convention signal high levels of risk and the need for the highest levels of surveillance, authority and problem-solving. Weak ties to crime in combination with strong ties to convention signal the low levels of risk associated with a specific situational - or emotional-reaction and the need, perhaps, of

nothing but "radical nonintervention". The interpersonal sensitivity of the offenders suggests how readily they will respond to relationship-oriented supervision and pick-up on the more subtle cues for anticriminal behaviour. The important inprogram findings of CaVIC were as follows:

a) the intensive, relationship-oriented supervision offered by volunteers was most effective with higher risk cases, and particularly so when those probationers were interpersonally sensitive;

b) the active listening strategy of practice was particularly inappropriate with the less interpersonally sensitive probationers; and,

c) the high emplathy - high socialization officers were the more effective officers regardless of type of probationer.

The present report re-examines these issues and findings with reference to the official reconvictions evident by the end of a three year postprogram follow-up. Also examined are some of the predictors of recidivism and which of these predictors appeared to possess some functional significance.

METHOD

The CaVIC methods are described in more detail than most readers would care to know in the original technical monograph (Andrews, Kiessling et al., 1979, with Appendices). Readers with nontechnical interests might find a summary of the original CaVIC project more helpful (Andrews and Kiessling, 1980).

In brief, 190 adult probationers were assigned randomly to either volunteer (n=94) or professional (n=96) supervision. The volunteers were not considered "companions" but "assistant probation officers" and they worked under the supervision of professionals. Assignment of probationers within the volunteer officer (n=60) and professional officer (n=14) pools was on the basis of availability and not tied to officer or probationer characteristics. Any reader who would wish to generalize the findings to their agency is advised to consult the original CaVIC reports for details on the participants, their roles, and their training. We are satisfied that the integrity of the experimental design was maintained for purposes of examining the Volunteer, Selection and Differential Treatment factors but note that the analyses of the audio-taped supervision sessions were based on a considerably reduced sample (n=48).

One hundred eighty-five of the original 190 CaVIC probationers were successfully matched, on the basis of name and birthdate, with the FPS records of the RCMP. The RCMP has asked that we note that in the absence of fingerprints, an accurate match cannot be guaranteed. Any reconviction during the 36 months following the termination of probation was accepted as evidence of recidivism. The number of reconvictions was coded as were the sentences imposed by the court. The FPS records were also employed to obtain a count of the number of postprogram follow-up months spent in prison. The FPS record includes only reconvictions supported by fingerprints and hence is an underestimate of even officially-recorded criminality. We know for example, that only 84% of our inprogram recidivists would have been identified, if the FPS files had been used to measure inprogram recidivism. Inprogram recidivism was based on reports of the supervising officers that a reconviction had occurred for an offence committed during the inprogram phase. We do not know how many of the postprogram convictions were for offences actually committed prior to the termination of probation but, with a three year follow-up period, it is unlikely that such occurrences would seriously influence conclusions. We do not want the recidivism rates to be presented to be viewed as accurate estimates of the absolute levels of recidivism. However, there is no reason to believe that differences in recidivism rates found as a function of program variables are in any sense biased.

Appendix A presents an overview of the recidivism measures and their intercorrelations. The Results and Discussion section includes the analyses of the program variables.

RESULTS AND DISCUSSION

The Selection and Volunteer Factors

Pretested officer Empathy and Socialization scores were split at their respective medians to form the Selection factor: the high empathy - high socialization officers were compared with the other officers. The Volunteer factor involved comparisons of supervision by volunteers with supervision by professionals. The analyses of variance in recidivism included sex of probationer as a covariate and the following pretested probationer characteristics as additional factors: Empathy (median split), Identification With Criminal Others (median split), and Age-Socialization (under 20 years of age and below the median on Socialization *versus* other probationers). Table 1 presents a summary of the main effects from the analyses of variance in recidivism. Table 2 presents the mean recidivism indices for the probationers supervised by the high empathy - high socialization officers and for those supervised by the other officers.

Supervision by the high empathy - high socialization officers was associated with significantly lower recidivism rates ($p < .02$, inprogram; $p < .04$, end of follow-up), a lower mean number of reconvictions ($p < .007$, inprogram; $p < .09$, follow-up), less severe court dispositions ($p < .008$, inprogram; $p < .01$, follow-up), and fewer postprogram follow-up months in prison ($p < .04$). In brief, the results suggest that by assigning probationers to the high empathy - high socialization officers rather than to the other officers, a program manager could effect a dramatic reduction in recidivism rates — a reduction of nearly 50% during the inprogram phase and a reduction of over 30% still evident by the end of a three year postprogram follow-up.

There was no evidence that the addition of supervision roles for citizen volunteers had any impact on recidivism indices. Supervision by volunteers was as effective overall as supervision by professionals. Thus, the present results suggest that the economic, political and educational values purported to be associated with citizen participation in direct service roles may be pursued without fear of increasing the overall recidivism rates of an office.

The overall findings regarding the Selection and Volunteer factors have obvious and major practical implications. Because of these implications, the factors were explored in more detail. A question of particular

interest was whether the importance of the Selection factor varied with the professional status of officers. There was some evidence of Selection by Volunteer interactions during the inprogram phase and at the end of the total follow-up period: inprogram, $F(1/140) = 3.64$, $p < .06$; follow-up, $F(1/140) = 2.71$, $p < .10$.

Inspection of Table 3 reveals that the recidivism rates were favouring the high empathy - high socialization professionals rather than the other professionals but not to a statistically significant degree. The effects of the Selection factor were strongest among the volunteers. In fact, a close inspection of Table 3 reveals that if an office were operating a volunteer program in order to achieve reduced recidivism rates, there would be no advantage whatsoever using volunteers unless they were the high empathy - high socialization type: the other volunteers tended to be less effective than professionals, regardless of the position of the professionals on Empathy and Socialization.

Two intriguing practical questions arise from Table 3. One, did the training, experience or the unique role of the professionals serve to dampen any effects of the natural predispositions they brought to their roles? If so, it suggests that effectiveness of volunteers presenting the less-preferred predispositions may be increased by training. Two, do the effects of the personality predispositons only become strong under conditions of intensive supervision? (Recall that volunteer supervision was relatively intensive.) If the personality factors are most important under intensive conditions then perhaps volunteers who present the less preferred personality patterns may function well in non-intensive supervision programs. Both of these issues require systematic exploration (Andrews & Kiessling, 1979) because any across-the-board application of selection criteria obviously requires that one has a large number of applicants for any program.[1]

Because of the issue of how selective any program can afford to be in actual practice, the recidivism rates were re-examined in relation to the four types of officers generated by classification on both Empathy and Socialization. Inspection of Table 4 shows that the high empathy - high socialization applicants are the most attractive and that the low empathy - high socialization applicants are the least attractive from the perspective of reducing inprogram and follow-up recidivism rates. Recall from the original CaVIC report that the selection of the most preferred applicants would also be associated with relatively high levels of consumer satisfaction, whether the consumers were considered to be the workers, the clients or the program managers.

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[1] A third possibility, explored in the next section of the Results, is the possibility that the effects of the Selection and Volunteer factors are complex functions of probationer characteristics.

The original report suggested that the addition of the Identification With Criminal Others scale to the selection battery would be associated with even greater control over recidivism rates. During the inprogram phase, the recidivism rate of probationers assigned to high empathy - high socialization - low identification officers was a very impressive 5% (n=27) compared to 25% (n=145) for the other officers, $F(1/155) = 6.14$, $p < .01$. However, by the end of the follow-up period the effect had reduced to a point below conventionally established levels of statistical significance, 25% versus 40%, $F(1/155) = 2.12$, ns. Given the number of applicants who would be screened out through the application of selection criteria based on the three scales, the practical value of such a strategy seems limited. Some practical value is suggested with reference to the content of training programs: trainees may be advised that the available evidence suggests that an over-identification with the client group is, if anything, a negative factor. Additional evidence on this point was presented by Wormith (1977) who found that prison inmates gave very poor evaluations to citizen volunteers who scored high on Identification With Criminal Others.

Differential Treatment: The Effects of the Selection and Volunteer Factors With Different Types of Probationers.

The Selection and Volunteer factors have been reviewed to this point without reference to the possibility that their effects might vary with the type of probationer assigned. Differential treatment strategies assume that recidivism rates may be reduced by assigning probationers to the most appropriate type of officer or treatment. In the CaVIC study probationers were randomly assigned to volunteers and professionals and to types of officers within the volunteer and professional categories without reference to pretested characteristics. The CaVIC assignment procedures allow an examination of what might have happened if differential treatment strategies had been employed.

Generally, the effects of the Selection factor did not vary reliably with any one of probationer Identification With Criminal Others, probationer Empathy or probationer Age-Socialization. However, as found in the original report, the effects of the Volunteer factor on inprogram recidivism varied with each of Identification ($F(1/140) = 4.55$, $p < .03$), Empathy ($F(1/140) = 5.91$, $p < .02$) and Age-Socilization ($F(1/140) = 10.89$, $p < .001$). With the exception of the interaction involving Age-Socialization ($F < 1.00$, ns), the interactions were still evident at the end of the follow-up period: Identification, $F(1/140) = 7.24$, $p < .008$); and Empathy, $F(1/140) = 5.13$, $p = .025$. Table 5 presents the overall pattern of results. Supervision by volunteers tended to be more effective than professional supervision when offered to the more empathic clients, to the clients who identified more strongly

with offenders, and to the young, unsocialized clients (inprogram only). On the other hand, professional supervision tended to be more effective than volunteer supervision when offered to the less empathic probationers, to those who identified less with offenders, and to the older or more socialized clients.

The pattern of results in Table 5 suggests that deliberate differential assignment on the basis of probationers' identification scores would have achieved an estimated overall recidivism rate of 27% compared to the 38% which was found at the end of the follow-up period. Similarly, assigning the less empathic clients to the professionals and the more empathic clients to the volunteers would have been associated with an overall follow-up recidivism rate of 32%.

As was the case in the original CaVIC report, the differential treatment effects are assumed to reflect the two major dimensions on which volunteer and professional supervision could be distinguished: volunteer supervision tended to be more relationship-oriented and to be more intensive (a much higher average frequency of contact between officer and probationer). Intensive supervision was most effective with the higher-risk clients and relationship-oriented supervision was most effective with the more empathic clients. It now appears that the volunteers' suppression of recidivism on the part of the young, unsocialized subgroup of probationers was very much due to the immediate effects of intensive supervision. The young, unsocialized probationers supervised by volunteers showed a dramatic jump in recidivism once they entered the postprogram phase. For future investigation, we note from Table 5 that the effects favouring volunteer supervision were tending to weaken over time while the effects favouring professional supervision were tending to strengthen.

The total number of cases included in CaVIC was not great enough to warrant a complete and fully confident exploration of higher-order interactions. However, because of the practical and ethical implications associated with any differential treatment strategies which make use of risk indicators, the possibility of higher-order interactions could not be ignored. Table 6 presents the follow-up recidivism rates of low, intermediate and high-risk cases by the Selection and Volunteer factors. The number of probationers represented in any cell in the table is too small for firm conclusions but the pattern of the tabled results certainly does not yield the conclusion that the volunteers were more effective than the professionals with the highest risk cases. Some reasonable inferences for Table 6 are as follows:

a) high empathy - high socialization volunteers were more effective with intermediate-risk probationers than their volunteer colleagues and the professionals;

b) the lowest-risk probationers were best supervised by high empathy - high socialization professionals but the high empathy - high socialization volunteers were a close second; and

c) the highest-risk probationers were best supervised by the high empathy - high socialization professionals and least well-supervised by the other groups of professionals.

Perhaps paradoxically, the last and most complex analysis of differential treatment effects has served primarily to confirm the overall findings presented at the beginning of the Results section: the selection of high empathy - high socialization officers for direct supervision roles will have the overall effect of reducing recidivism rates. Regardless of type of probationer and whether we look at volunteer or professional officers, possession of the dual sensitivities to persons and to conventional rules was never associated to any significant degree with increased recidivism but was for most subgroups associated with reduced recidivism.

Some Dimensions of Correctional Practice and Differential Treatment

Table 7 presents the predictive correlations between the objective tape-based measures of practices and recidivism, both inprogram and follow-up. The following practices were associated with relatively low rates of inprogram recidivism: authority ($p < .004$), anticriminal modeling ($p < .008$), anticriminal differential reinforcement ($p < .006$), and problem-solving with a concrete community focus ($p < .002$). The non-directive counselling strategy of active listening (paraphrasing of substance and reflection of feelings) was associated with relatively high rates of inprogram recidivism ($p < .02$). Measures of the following practices were unrelated to inprogram recidivism: problem-solving with a personal/emotional or recreational focus, referrals to community agencies, non-contingent friendly expressions, self-disclosure, and offering or asking for concrete information.

By the end of the three year postprogram follow-up period, authority practices ($p < .05$) and anticriminal modeling ($p < .02$) continued to be associated with reduced rates of recidivism. The predictive validity of both anticriminal differential reinforcement and problem-solving with a community focus were no longer statistically reliable in the total sample. Rather, referral to community agencies had emerged as a significant factor ($p < .04$). It appears that linking probationers to services which may persist beyond the formal probation period is an effective practice over the longer-term. To our knowledge, this is the first systematic, empirical

evidence that the advocate-broker strategy has direct implications for recidivism (Andrews, 1979a, Chapter Four).

Active Listening continued to be associated with increased recidivism at the end of the follow-up period. According to a social learning perspective, interpersonal attention is a powerful reinforcer and when offered to persons who are predisposed to express procriminal sentiments and behaviours, such apparently non-contingent attention may in fact function as approval for the client's anticonventional positions (Andrews, 1979a, b; 1980a, b). Important supporting evidence for this interpretation is presented in Table 8. The active listening strategy was most strongly associated with increased recidivism when the officers did not engage in use of authority during their supervision sessions.

Table 9 presents the predictive correlations between the objective measures of practices and any recidivism by the end of the follow-up period for the low and the high socialization probationers (median splits). The differences between the correlations for the low and high socialization probationers are interesting because they suggest differential treatment effects. The separate correlations also serve as statistical controls for pretested probationer characteristics.

The pattern of results is, we think, remarkably clear. It was the higher-risk clients who appeared to respond most to high levels of authority, to problem-solving and to increased access to community resources. In addition, the higher-risk cases were the ones most likely to show increased recidivism when exposed to high levels of non-directive, relationship-oriented practices. Anticriminal modeling appears to have been equally effective with the low and high risk cases providing practice-level data which is highly consistent with the previously reported general effectiveness of high empathy - high socialization officers.

The footnotes to Table 9 draw attention to some additional findings of interest. It was only the more empathic probationers who responded favourably to noncontingent friendly expressions, and they were less adversely affected by active listening. It seems that the more empathic conventional clients will be sensitive to relationship practices but also, we expect, pick up on the more subtle prosocial and anticriminal messages that an officer may communicate. It appears that to offer low levels of authority in combination with non-directive active listening to a low empathy client is to very actively promote crime.

The results involving the measures of actual practices were based on correlational rather than experimental manipulations and the results

were based on a small sample of male cases. The results suggest a number of considerations which are of immediate practical significance but which also demand immediate and systematic empirical exploration:

a) contrary to the rhetoric and the misinterpretations of the program evaluation literature which are abundant in corrections, the actual practices of correctional workers make a difference in terms of recidivism — the results reviewed cannot, in any logical way, be dismissed as due to the "mere fact" of being on probation; they cannot be considered a "mere" reflection of the selection of low risk cases (the effects were strongest among the higher risk clients); and, the results cannot be attributed to some magical powers associated with the personality of the officer (the Empathy scale was not related to any of the practice measures and the Socialization scores of the officers related only to high levels of anticriminal modeling and low rates of friendly expressions);

b) contrary to those who advocate single-practice perspectives on corrections, the results suggest effective officers engage in a variety of correctional practices, most of which may make a contribution to the control of recidivism;

c) of the various single-practice perspectives, the non-directive relationship-oriented school appears to be the most inappropriate for corrections — in fact, we would recommend on the basis of the present findings and our earlier reviews of the literature that any volunteer program which relies upon training in active listening be suspended unless it is systematically exploring the conditions under which such practices may be effective;

d) preservice and inservice training of volunteers and professionals should include, as a minimum, exposure to the present and other (Andrews, 1979b) findings that suggest that a correctional worker may be actively effective or actively ineffective;

e) systematic skill training for correctional counsellors is indicated in the areas of use of authority, anticriminal modeling, problem-solving with a concrete community focus and in the ways of increasing the offenders' access to community resources.

The Prediction of Recidivism: The Predictive and Functional Validities of Measures of Probationer Characteristics

A reinspection of the Probationer factors in Table I reveals that probationer age, sex and two of the three personality measures were statistically reliable predictors of recidivism. Most notable is the fact that the predictability of recidivism increased over time, from a multiple correlation of .38 (any inprogram recidivism) to a multiple correlation of .47 by the end of the three year postprogram follow-up period. The increased predictability of recidivism was not due to the Selection factor (the inprogram and follow-up Selection Beta values in Table 2 were very similar) but due to the increasing predictive validity of the measures of probationer characteristics. We expect that the increasing predictability of recidivism over time reflects at least three considerations. One, an increased observation period simply increases the opportunity for predispositional measures to demonstrate their validity (Epstein, 1979). Two, supervision efforts during the inprogram phase were successfuly suppressing predispositional tendencies. Finally, the overall inprogram predictive validity of premeasured probationer attributes was dampened by differential treatment effects. A situation which would dampen the predictive validity of pretested factors over the longer-term would be that of <u>real</u> change occurring on those measures during the intervention phase.

The attributes of probationers and their situations which were predictive of recidivism were of two methodological types: basic bio-social information available from interviews or written records, and scores on the paper and pencil attitude and personality battery. Inspection of Table 10 reveals that the single best psychometric predictors of recidivism were the measures of Criminal Sentiments, Socialization, Psychopathy (aggressive), Neuroticism (acting-out), Inadequacy-Immaturity and a history of trouble in school (Scholastic Maladjustment). Inspection of Table 11 reveals that the best bio-social predictors of recidivism were age, sex, last grade completed, marital status and ties to delinquents (an accomplice and/or delinquent friends noted in PSR). These indices functioned better than did rated level of employment (personal or parental) and previous convictions as an adult. Unfortunately, ratings on stability of prior employment — perhaps the best socio-historical predictor of recidivism represented in the literature (Andrews, Pirs et al., 1980) — were not available.

The basic bio-social data available on the CaVIC probationers were rescored according to the approach taken with the Level of Supervision Inventory (LSI), a risk-need scale currently under development in the Ottawa Probation and Parole Office (Andrews, 1981b). With this approach the various indicators of risk are assigned values of "0" (low risk) or "1" (higher risk) and the values are summed over items. The risk indicators

were age (under 20 years of age), sex (male), delinquent associates (some), Blishen SES (under 50), marital (unattached), marital (ever separated/ divorced), occupational level (labourer or lower), occupation (unemployed), education (less than Grade 11), and previous record (adult recidivist). The LSI scores varied from zero to nine and were more predictive of recidivism than was any other single psychometric or bio-social measure: .27, $p < .001$ (inprogram); .37, $p < .001$ (postprogram); and .41, $p < .001$ (end of follow-up). Table 12 presents the distribution of scores on the brief bio-social LSI in relation to recidivism. Note that the tabled LSI distribution is not intended in any sense to represent the most efficient predictive approach with bio-social information. The inventory is still under validation so such an inference is not yet possible or intended.

Table 13 presents a summary of a step-wise multiple regression on recidivism which included the brief LSI scores and the attitude and personality battery. No more than eight predictors were allowed to enter the prediction format. Note that the LSI was the first variable entered but that the addition of psychometric information increased the predictability of recidivism. Overall, pretested Probationer factors accounted for 24% of the variability in recidivism by the end of the follow-up period.

As reported in Appendix A, the recidivist sample accounted for a very large amount of criminal justice processing. A total of 194 reconvictions were registered against the 185 cases. Those recidivists with more than one reconviction (n=44 or 24% of the total sample) accounted for a full 85% of the total number of reconvictions. In comparisons with the nonrecidivists and the recidivists with only one reconviction recorded, that subgroup of "chronic" recidivists presented the highest mean bio-social LSI score ($F(2/182) = 19.65$, $p < .0001$) and the largest means on Psychopathy ($F(2/170) = 8.27$, $p < .0004$), Neuroticism ($F(2/171) = 4.50$, $p < .01$), Scholastic Maladjustment ($F(2/171) = 4.32$, $p < .01$) and Inadequacy-Immaturity ($F(2/170) = 4.00$, $p < .02$). Basic bio-social and psychometric information may assist in the identification of potential recidivists and perhaps even the more criminally-active within that group. (The fact that the same measures have been found to predict self-reported criminal activity suggests that the measures are not simply tapping a propensity to get caught.) The prediction of recidivism on the basis of measures of attributes of offenders and their situations has some important practical implications. Among those implications is the development of risk and need scales which may facilitate the identification of those offenders who would profit most from high levels of surveillance and intensive programming and those who would profit most from reduced attention. However, an equally important issue, when a program has selected reduced recidivism as an objective, is what attributes of offenders and their situations are reasonably amenable to influence and would, if changed, be associated with subsequent reductions in the chances of recidivism?

This is the issue of "functional" or "dynamic" validity. Functional validity estimates represent correlations between attitude change scores (post minus prescores) and recidivism during the three year postprogram follow-up period. The postprogram period was employed in order to reduce the possibility that the reconvictions were for offences committed prior to the sixth month retest. Partial correlations were computed with statistical controls introduced for age, sex and prescores. Functional validity was suggested for the measures of Identification With Criminal Others (r = .19, $p < .01$) and Family Dissension (.17, $p < .05$): an anti-criminal shift in sentiments and an improved family situation were associated with reduced recidivism. While these two findings are consistent with a general social learning perspective, it is equally notable that the functional validity of two additional measures of criminal sentiments was not maintained (Tolerance for Law Violations and Attitudes Toward the Law, Courts and Police). We expect that the functional validity of measures of attributes of offenders and their situations will be found to increase as:

a) the measures become less dependent upon items which are essentially fixed socio-historical indicators;

b) measurement batteries incorporate more direct observations of behaviour and situations; and,

c) estimates of functional validity are derived with the attention due to potential moderator variables such as age, sex, self-management skills and social supports for crime (Andrews, 1980b).

SUMMARY AND CONCLUSIONS[1]

This three year postprogram follow-up of the CaVIC probationers has yielded a number of important findings:

a) probationers supervised by those volunteers who were both interpersonally sensitive and predisposed to express anticriminal alternatives recidivated at lower rates than did probationers assigned to volunteers who did not present the dual sensitivities to persons and to rules;

b) supervision by citizen volunteers and professionals was differentially effective depending upon the type of probationer assigned;

c) objective behavioural measures on a number of dimensions of actual supervision practices were predictive of recidivism;

d) the effective practices, over the long term, were use of authority (not interpersonal domination), anticriminal modeling, problem-solving with a concrete community focus, use of community resources, and relative avoidance of the non-directive relationship strategy of active listening.

e) the effects of intensive supervision by volunteers and the predictive value of the measures of actual practices were strongest among the higher-risk probationers (but not necessarily among the highest risk cases);

f) when predicting recidivism on the basis of measured attributes of offenders and their situations, the predictability of recidivism increased over time;

g) a relatively small proportion of probationers were responsible for a very large number of reconvictions;

h) there was some, but limited, evidence that anticriminal attitudinal change and improved family functioning were associated with subsequent reductions in the chances of recidivism; and,

i) postprogram follow-ups function not only to test the maintenance of intervention effects but also to explore the possibility that the effects of some factors only emerge over the longer-term; the latter was the case regarding the predictive validity of the measure of officers' use of community resources.

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[1] Please consult the Results and Discussion section for detailed implications.

These findings suggest some immediate practical applications in corrections which demand further systematic empirical exploration when and where applied. Perhaps most importantly, CaVIC has provided evidence that the actual practices of correctional workers have implications for recidivism. All those working in corrections know too well that it is possible to produce either lists of negative correctional effects (in the Martinson tradition) or lists of positive effects (Ross and Gendreau, 1980). CaVIC suggests that it is possible to identify specific sets of practices which appear to increase the chances of recidivism and many which appear to reduce those chances. Moreover, the effects of one set of practices may depend upon the other types of practices in which an officer engages. The suggested power of the specific actions of direct service workers is something to which all practitioners should be sensitive and for which they should be applauded.

A second implication is that managers and workers have at hand some concrete means of influencing counselling and supervision practices. One approach is that of the selection of workers predisposed to engage in effective practices. Another is to create intensive supervision roles for citizen volunteers (or professionals) and to assign those volunteers (or professionals) not the "easy" cases but the higher-risk cases, those who appear most likely to profit from intensive supervision. A third management-level function is the creation of preservice and inservice training programs which would aim to increase workers' abilities on the dimensions of effective correctional practices. Research is strongly indicated here in order to determine the most appropriate levels and combinations of selection, training, program structure and differential assignment of cases. The CaVIC findings suggest that the gains would be significant reductions in recidivsm with relatively high levels of participant satisfaction.

Systematic assessments of the attributes of offenders and their situations have implications for the assessment of risk, for the selection of the truly functional intermediate targets for change, and for differential treatment. While the CaVIC findings are far from exhaustive on any of these three functions of assessments, the results strongly support energetic and rigorous pursuit of the limits of their ethical application.

CaVIC has documented the value associated with program evaluations which have a broad but explicit conceptual base and which manipulate and/or measure independently the different levels of correctional programming. Given the focus on recidivism, the findings speak to the crime control objective of corrections most directly. However, a lesson from CaVIC is that appeals to the other objectives of correctional programming should not be allowed to dismiss the effects on recidivism. Recall that a broad approach to selection suggested that one considers not only the interpersonal skills of the workers but also their propensity to establish anti-criminal contingencies. A broad approach to correctional practices has shown that single-focus approaches to correctional practices are seriously

incomplete and that the traditional authority versus "helping" battle is largely false once one examines the practices in relation to outcome. Similarly, the broad approach suggests that rather than talk of the "crime control" versus the "criminal justice" models for corrections, we should be looking to how correctional efforts relate to the variety of objectives set for corrections. We doubt that even the most devoted adherents to criminal justice objectives — economy, protection of rights of offenders, administering the sentence, etc. — would argue that we should knowingly (or unknowingly) increase crime or fail to take reasonable steps which would decrease criminal activity. The results with the Selection factor were quite informative on the possibility of specific efforts serving multiple objectives: supervision by high empathy - high socialization officers was associated with reduced recidivism but also with relatively high levels of satisfaction with supervision from the perspective of persons usually thought to be quite divergent in their opinions, that is, managers, officers and probationers.

Systematic research on applications, replications and extensions of the CaVIC findings and approach are indicated in a variety of service areas including adult probation and parole, juvenile probation and after-care, prisons, training schools, group homes, and prevention and mental health programs. Extensions to female samples are required because our audio-tape sample did not include any women probationers and there is emerging evidence that the correlates and predictors of female criminality are not always the same as the factors which relate to male criminality (Addie, 1980). Comparisons between different offices would be particularly interesting. A major question facing the human and social services has to do with the conditions under which attributes of the surrounding community influence the success of agency efforts. Attributes of the surrounding community may influence the recidivism rates of, and consumer satisfaction with, an agency either directly or through interactions with elements of the agency's structure and practices. The contributions of the surrounding community can only be understood through studies which actually compare process and outcome in different communities.

Finally, the research findings of CaVIC and those of the other studies cited in the CaVIC reviews of the literature speak to those in positions which require decision-making regarding how scarce resources will be distributed across the various human and social service agencies. Without intending to foster inter-agency competition, it appears to be the case that corrections is in a relatively unique position with regard to the quality of the empirical evidence relating to its ability to document how resources are serving publically-stated goals. The public and the politicians must be made aware of the fact that systematic empirical research in corrections is revealing that correctional structures and practices are having measurable impact on socially important outcomes and that, in combination with careful assessment of attributes of offenders and their situations, effects on recidivism rates may ultimately be shown to influence community crime rates.

Table 1

A Summary of the Main Effects in the Analyses of Variance in Inprogram Recidivism and Recidivism at the end of the Follow-Up Period

	Any Reconvictions				Number of Reconvictions				Severity of Sentence				Number of Follow-Up Months in Prison	
	Inprogram		Follow-Up		Inprogram		Follow-Up		Inprogram		Follow-Up			
	ms	F	ms	F	ms	F	ms	F	ms	F	ms	F	ms	F
Prob. Sex	1.05	8.45***	2.53	13.58***	1.06	1.27	22.26	7.75***	10.77	5.65**	55.50	14.44***	92.55	4.(
Selection	.66	5.31**	.79	4.22**	6.18	7.45***	8.07	2.81*	13.81	7.25***	26.33	6.85***	87.07	4.:
Volunteer	.15	1.21	.00	.00	.94	.29	1.36	.47	2.90	1.52	.02	.00	1.54	.(
Age-SOC	1.96	15.95***	3.59	19.24***	6.86	8.27***	58.39	20.34***	37.54	19.70***	79.07	20.58***	115.05	5.7
ICO	.10	.80	.80	4.27**	.00	.00	13.39	4.66**	2.42	1.27	15.12	3.93**	36.06	1.8
EMP	.18	1.42	.32	1.73	6.18	7.45***	7.09	2.47	9.09	4.77**	10.47	2.72*	23.56	1.1
Error (df)	.12 (140)		.19 (140)		2.27 (155)		2.87 (155)		1.90 (140)		3.84 (140)		19.95 (15	
Multiple R	.38		.47		.29		.44		.42		.49		.32	

* $p < .10$
** $p < .05$
*** $p < .01$

Table 2

The Main Effects of the Selection Factor on Recidivism, Inprogram and by End of Follow-Up

	High Empathy High Socialization (n=68)	Other Officers (n=104)	Beta	$p <$
Prop. with any Reconviction				
Inprogram	.14	.27	.15	.02
Follow-Up	.29	.43	.14	.04
Mean Number of Reconvictions				
Inprogram	.16	.56	.19	.007
Follow-Up	.75	1.20	.11	.09
Mean Seriousness Disposition				
Inprogram	7.61	7.02	.18	.008
Follow-Up	7.08	6.22	.18	.011
Mean Follow-Up Months in Prison	.45	1.94	.15	.04

Notes: a) The Beta and p values were derived from the analyses summarized in Table 1. The reduction in the Beta for mean number of reconvictions likely reflects the reduced opportunity for criminal activity associated with more severe sentences.

b) For disposition, no reconviction received a score of "8".

Table 3

The Effects of the Selection Factor for the Volunteer and Professional Samples: Proportion with Any Reconvictions

	High Empathy High Socialization	Other Officers	Beta	F
Volunteer Sample	(n=35)	(n=55)		
Inprogram	.067	.303	.28	7.35***
Follow-Up	.253	.474	.22	4.63**
Professional Sample	(n=36)	(n=57)		
Inprogram	.217	.266	.05	<1.00
Follow-Up	.339	.435	.10	<1.00

** $p < .05$

*** $p < .01$

Table 4

The Four Combinations of Officer Empathy and Socialization in Relation to Any Reconvictions, Inprogram and at End of Follow-Up

	Low Empathy		High Empathy		
	Low SOC (n=36)	High SOC (n=30)	Low SOC (n=46)	High SOC (n=71)	Interaction[a] F(1/172)
Inprogram	.19	.40	.28	.14	8.93***
Follow-Up	.44	.53	.41	.30	3.02*

*$p < .10$

***$p < .01$

[a] Analyses of variance with Officer Empathy, Socialization and Identification as factors and probationer age and sex as covariates. The recidivism rates are unadjusted for probationer characteristics.

Notes: a) For future investigation. There was a nonsignificant Volunteer X Empathy X Socialization interaction. Within both the volunteer and professional samples, the high-high combination produced the lowest recidivism rates at follow-up (29% and 31% respectively). However, it was among the professionals that the low empathy - high socialization combination was most strongly associated with recidivism (64% professionals; 43% volunteers).

b) For readers familiar with the original CaVIC report. A highly significant finding for theory was the high inprogram recidivism rate associated with the high empathy - low socialization combination relative to the low empathy - low socialization combination. That finding was still evident at follow-up within the professional sample (44% versus 33%). However, within the volunteer sample, the probationers supervised by the low empathy - low socialization officers showed a dramatic increase in recidivism once terminated, from 22% (inprogram) to 56% at the end of the follow-up period (versus a follow-up rate of 38% for the high empathy - low socialization combination).

Table 5

The Differential Effects of Volunteer Supervision By Type of Probationer: Any Recidivism, Inprogram and Follow-Up

	Professional	(n)	Volunteer	(n)
Identification With Criminal Others				
Inprogram				
High	.31	(50)	.21	(45)
Low	.13	(37)	.21	(45)
Follow-Up				
High	.51	(50)	.44	(45)
Low	.21	(37)	.34	(45)
Empathy				
Inprogram				
High	.26	(41)	.12	(37)
Low	.24	(43)	.27	(53)
Follow-Up				
High	.38	(41)	.28	(37)
Low	.37	(43)	.46	(53)
Socialization				
Inprogram				
Young Unsoc.	.53	(25)	.30	(32)
Others	.13	(68)	.19	(60)
Follow-Up				
Young Unsoc.	.62	(25)	.64	(32)
Others	.30	(68)	.28	(60)

Table 6

The Effects of the Selection and Volunteer Factors on Any Recidivism at the End of the Follow-Up By Probationer Age-Socialization and Identification With Criminal Others

	High Empathy / High Socialization		Other Officers	
	Volunteers (n)	Professionals (n)	Volunteers (n)	Professionals (n)
Highest Risk[a]	.62 (9)	.50 (6)	.61 (13)	1.00 (9)
Intermediate Risk[c]	.20 (10)	.41 (17)	.36 (22)	.39 (28)
Lowest Risk[b]	.12 (16)	.00 (11)	.39 (18)	.25 (16)

[a] Highest-risk clients: above the median on Identification, and the young, unsocialized.

[b] Lowest-risk clients: low Identification, and older or socialized.

[c] Intermediate-risk clients: the remaining probationers.

Note: The number of cases is too small for further cross-classification with Probationer Empathy.

Table 7

The Correlations Between Correctional Practices and Recidivism (n=46)

	Inprogram	Follow-Up	Practice Scale Means (SD)
Authority	-.38***	-.24**	.48 (.44)
Anticriminal			
Modeling (n=33)	-.41***	-.36**	.88 (.26)
Differential Reinf.	-.36***	-.19	.90 (.17)
Problem-solving			
Community	-.29**	-.14	2.79 (1.17)
Pers./Emotional	.06	.00	.32 (.51)
Recreation	.07	.02	.40 (.45)
Referral, Comm. Resources	-.13	-.26**	.20 (.35)
Relationship			
Active Listening	.24**	.30**	.30 (.25)
Friendly	-.15	-.15	.24 (.20)
Self Disclosure	.13	.02	.32 (.29)
Concrete Information	-.17	-.15	.78 (.22)
(Prop. REC.)	(.24)	(.39)	

** $p < .05$;

*** $p < .01$

Table 8

The Practice of Authority as a Moderator of the Predictive Correlation Between Active Listening and Recidivism: Pearson Coefficients

	Low Authority (n=23)		High Authority (n=23)	
	r	Prop. REC.	r	Prop. REC.
Inprogram	.44**	.39	-.17	.09
Postprogram	.46***	.48	.08	.30
Mean Active Listening (SD)	.32 (.27)		.27 (.23)	

** $p < .05$

*** $p < .01$

Table 9

Probationer Socialization as a Moderator of the Correlations Between Counselling Practice and Follow-Up Recidivism: Pearson Coefficients

	Low SOC (N=23)		High SOC (n=21)		
	r	Mean (SD)	r	Mean (SD)	z
Authority	-.67***	.46 (.46)	.24	.49 (.44)	3.28***
Anticriminal Modeling (n=19)	-.39**	.88 (.29)	-.43** (n=13)	.87 (.24)	(ns)
Problem-solving, Comm. Focus	-.35**	2.75 (1.56)	.30*	2.74 (.54)	2.08**
Referral, Comm. Resources	-.41**	.30 (.46)	-.10	.11 (.16)	1.65**
Active Listening	.47***	.31 (.27)	-.10	.26 (.20)	1.88**
Prop. (REC.)	.48		.24		

* $p < .10$; ** $p < .05$; *** $p < .01$

Notes: a) Client Empathy functioned as a moderator variable in a manner similar to Socialization. Active Listening was correlated positively with recidivism among low Empathy clients (.46, $p < .01$) versus (-.22, ns) among high Empathy clients. Authority was most strongly associated with reduced recidivism among low Empathy clients (-.53, $p < .01$) versus (.12, ns).

b) It was only among the high Empathy clients that friendly expressions on the part of the officer were directly linked to reduced recidivism (-.56, $p < .01$) versus (.00, ns).

c) Problem-solving with a personal/emotional focus was tending to be associated with increased recidivism among clients high on Identification With Criminal Others (.36, $p < .05$) versus (-.28, $p < .10$).

Table 10

The Predictive and Functional Validities of Pretested Attitude and Personality Measures of Probationers (n=153)

	Predictive (r)	Functional[a] (Partial r)
Criminal Sentiments		
Law, Courts, Police	-.14**	.08
Tolerance for Law Violations	.14**	.03
Identification With Criminal Others	.12*	.19***
Conventional Success Orientation		
Value Education	-.03	.01
Value Employment	-.03	.04
Conventional Sensitivities		
to rules: Socialization (Gough)	-.18**	.10
to persons: Empathy (Hogan)	-.05	-.03
Sense of Personal Competence/Social Power		
Awareness of Limited Opportunity	.10	-.08
Isolation, Normlessness, Powerlessness	-.01	.03
Psychic Discomfort		
Self-Esteem	-.06	-.01
Anxiety	-.02	-.01
Personality Dimensions of Criminality		
Psychopathy, aggressive	.28***	-.01
Neuroticism, acting-out	.22***	-.03
Inadequacy-Immaturity	.08	-.04
Scholastic Maladjustment	.22***	-.01
Family Dissension	.03	.17**

* $p < .10$; ** $p < .05$; *** $p < .01$.

[a] Partials, controlling for age, sex and prescores.

Table II

The Predictive Validity of Some Basic Bio-social Measures:

Proportion Recidivating, Inprogram and Postprogram

	Inprogram (Tau)	Postprogram (Tau)	End of Follow-Up (Tau)
Age			
Under 20 years (100)	.29	.40	.52
20 years plus (85)	.16 (.15)**	.11 (.33)***	.25 (.28)***
Sex			
Male (145)	.27	.32	.45
Female (40)	.10 (.16)***	.07 (.23)***	.17 (.24)***
Last Grade Completed			
11 or greater (66)	.17	.11	.23
10 or less (119)	.27 (.12)*	.35 (.27)***	.49 (.25)***
Marital Situation			
Attached (40)	.12	.12	.22
Sep./Wid./Div. (21)	.24	.15	.29
Single (124)	.27 (ns)	.35 (.26)***	.47 (.18)***
Level of Occupation			
Higher (78)	.18	.27	.33
Labourer (107)	.27 (.11)*	.26 (ns)	.44 (.11)*
Parental Occupation (Blishen SES)			
50 or more	.20	.28	.37
49 or less	.27 (ns)	.25 (ns)	.42 (ns)
Delinquent Ties[a]			
Accomplice and Associates	.38	.36	.56
Accomplice or Associates	.21	.39	.50
Neither indicated	.28 (ns)	.17 (.19)***	.37 (.18)**

[a] Based on PSR Reports.

Table 12

A Brief Socio-Historical Level of Supervision Inventory in Relation to the Proportion of Probationers Reconvicted Inprogram, Postprogram and at End of Follow-Up

The CaVIC LSi	n	% of Total	Inprogram f	Inprogram prop.	Postprogram f	Postprogram prop.	End of Follow-Up f	End of Follow-Up prop.
8-9	18	9.7	10	.56	9	.50	14	.78
6-7	69	37.3	20	.29	25	.36	36	.52
4-5	63	34.0	9	.14	15	.23	19	.30
2-3	27	14.6	4	.14	0	.00	4	.14
0-1	8	4.3	0	.00	0	.00	0	.00
			(r = .27)		(r = .37)		(r = .41)	

Table 13

A Summary of a Multiple Regression on Recidivism at the End of the Follow-Up Period (n=167)

Variable	Beta	Multiple R
LSI Score	.3588	.44
Socialization	-.0092	.47
Fake	.0090	.47
Inadequacy	.0084	.48
Toleration for Law Violations	.1037	.48
Law, Courts, Police	.1304	.49
Psychopathy	.0091	.49
Value Employment	-.0055	.49

$F(8/158) = 6.28$, $p < .01$

Note: A step-wise procedure with no more than 8 predictors allowed to enter.

REFERENCES

Addie, D. An Exploration of the Sex Differences in the Correlates of Criminality. Unpublished Honours thesis, Carleton University, 1980.

Andrews, D. A. Functional Validity: Increasing the Theoretical and Practical Significance of Descriptive Research. Department of Psychology, Carleton University, 1981a. (In preparation)

Andrews, D. A. Report on the First Year of the Assessment and Evaluation Project. Submitted to the Ontario Ministry of Correctional Services, 1981b. (Unpublished)

Andrews, D. A. Some Experimental Investigations of the Principles of Differential Association Through Deliberate Manipulations of the Structure of Service Systems. American Sociological Review, 1980a, 45, 448-462.

Andrews, D. A. A Personal, Interpersonal and Community-Reinforcement Perspective on Deviant Behaviour (PIC-R). Department of Psychology, Carleton University, 1980b. (Unpublished)

Andrews, D. A. The Anticriminal Dimension of Correctional Counselling and Probation and Parole Supervision: The "What and How" of Effective Modeling and Reinforcement. Ottawa: Probation and Parole Services, 1980c.

Andrews, D. A. The Dimensions of Correctional Counselling and of Supervisory Process in Probation and Parole. Toronto: Ontario Ministry of Correctional Services, 1979a.

Andrews, D. A. The Friendship Model of Voluntary Action and Controlled Evaluations of Correctional Practices: Notes on Relationships with Behaviour Theory and Criminology. Toronto: Ontario Ministry of Correctional Services, 1979b.

Andrews, D. A. and Kiessling, J. J. Program Structure and Effective Correctional Practices: A Summary of the CaVIC Research. A chapter in R. R. Ross and P. Gendreau (eds) Effective Correctional Treatment. Toronto: Butterworth, 1980.

Andrews, D. A., Kiessling, J. J., Russell, R. J. and Grant, B. A. Volunteers and the One-to-One Supervision of Adult Probationers: An Experimental Comparison with Professionals and a Field Description of Process and Outcome. Toronto: Ontario Ministry of Correctional Services, 1979.

Andrews, D. A., Pirs, S., Walker, J. and Hurge, A. A Theoretical Research and Program Framework for Employment Oriented Services in Probation and Parole. An Interim Report to the Ontario Ministry of Correctional Services, 1980.

Epstein, S. The Stability of Behaviour: On Predicting Most of the People Much of the Time. Journal of Personality and Social Psychology, 1979, 37, 1097-1126.

Gendreau, P. and Leipciger, M. The Development of a Recidivism Measure and its Application in Ontario. Canadian Journal of Criminology and Corrections, 1978, 20, 3-17.

Glaser, D. Remedies for the Key Deficiency in Criminal Justice Evaluation Research. Journal of Research in Crime and Delinquency, 1974, 10, 144-54.

Gough, H. G. Manual for the CPI. Palo Alto: Consulting Psychologist, 1969.

Hogan, R. T. Development of an Empathy Scale. Journal of Consulting and Clinical Psychology, 1969, 33, 307-316.

Kiessling, J. J. and Andrews, D. A. Behavior Analysis Systems in Corrections: A New Approach to the Synthesis of Correctional Theory, Practice, Management and Research. Canadian Journal of Criminology, 1980, 22, 412-427.

Ross, R. R. and Gendreau, P. (eds) Effective Correctional Treatment. Toronto: Butterworth, 1980.

Wormith, J. S. Converting Prosocial Attitude Change to Behaviour Change Through Self-Management Training. Ph.D. dissertation, University of Ottawa, 1977.

Appendix A

An Overview of the Measures of Recidivism

Appendix A: An Overview of the Measures of Recidivism

Table A1 presents an overview of the recidivism measures: the proportion of probationers reconvicted during the program phase and during each of the three years of postprogram follow-up; the mean number of reconvictions; the disposition score (Gendreau et al., 1978) and the mean number of follow-up months spent in prison. The amount and seriousness of criminal activity was generally decreasing over the measurement periods. For example, 23% were reconvicted during the inprogram period but less than 10% had a reconviction recorded during the third postprogram follow-up year. The mean number of reconvictions was reduced by a half from the inprogram (.40) phase to the third year post program period (.19).

Examining the trends over time in a cumulative manner shows that the number of recidivists had nearly doubled from the end of the inprogram period to the end of the three year postprogram follow-up: from 23% of the sample to 40% of the sample.

Note that only 20% of the probationers had received a prison sentence by the end of the follow-up period, (see Table A2 for a summary of dispositions). Generally, the offences and the offenders were not of the type deemed appropriate for the most severe sentencing options. The offending behaviours were largely against property.

The recidivists (n=73) did account for an impressive amount of official processing. A total of 194 reconvictions were registered, an average of 2.68 offences for each recidivist. A total of 270 months of prison time was served over the three year postprogram period, an average of 3.70 months for each recidivist. Those recidivists with more than one reconviction (n=44 or 24% of the total sample) accounted for 165 of the 194 reconvictions, a full 85% of the total with an average of 3.75 convictions each.

One solid predictor of postprogram recidivism was inprogram recidivism. Only 21.1% of inprogram nonrecidivists (n=142) were reconvicted during the postprogram period compared to 44.2% of the 43 inprogram recidivists, Tau=.22, $p < .001$. Twenty-four (33%) of the recidivists (n=73) were reconvicted during the inprogram phase, 19 (26%) were reconvicted during both phases, and 30 (41%) were reconvicted only during the postprogram phase.

Table A3 presents the intercorrelations within the inprogram and postprogram data sets. Table A4 presents the predictive correlations between the inprogram measures and the postprogram measures. The simple dichotomy of no reconviction ("0") versus a reconviction ("1") appears to be the most informative measure in terms of its ease of interpretation and in terms of the relationships it shares with other measures. Within both the inprogram

and postprogram data sets, "any recidivism" correlated more strongly with disposition than did "number of reconvictions". When predicting from the inprogram to the postprogram phase the fact of "any inprogram convictions" was a better predictor than was "number of reconvictions". Because of its simplicity and informative value, the dichotomous measure was employed as the major measure in the main body of this report.

Table A1

An Overview of the Recidivism Data (n=185)

		Postprogram				
	Inprogram	Year I	Year II	Year III	Total Post	End of Follow-Up
Prop. Any	.232	.135	.135	.097	.265	.395
Mean Number	.40	.20	.26	.19	.65	1.05
Mean DISP.	7.24	7.49	7.49	7.59	6.92	6.43
Mean Months in Prison	___	.42	.67	.37	1.46	___

Table A2

The Disposition Index, Most Serious Disposition, Inprogram or Postprogram (n=185)

	f	Percent
1. Prison sentence, 2 years and over	0	0.0
2. Prison sentence, 90 days to 2 years less a day	26	14.1
3. Prison sentence, 89 days or less	11	5.9
5. "Wanted", "at large"	5	2.7
6. Probation	25	13.5
7. Fine, suspended sentence	6	3.2
8. No record of conviction	112	60.5

Table A3

The Correlations Among Recidivism Indices Within the Inprogram and Postprogram Data Sets (n=185)

RECONVICTIONS

	Any	Number	Disposition
		(Inprogram)	
Any		.73	-.85
Number	.70		-.74
Disp.	-.87	-.77	
	(Postprogram)		

Table A4

Inprogram Recidivism Indices and the Prediction of Postprogram Recidivism (Pearson *rs*)

	Reconvictions			
	Any	Number	Disposition	Months in Prison
Inprogram				
Any	.22	.17	-.20	.22
Number	.12	.15	-.13	.19
Disposition	-.23	-.25	.24	-.38